◆ HEALTH ◆

EDITED BY

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LONDON: *FRIDAY, SEPTEMBER* 27, 1889.

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Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

FEW experiences in life, says a medical journal, at any rate amongst members of the wealthier classes, are more wretched than that of the individual who may unfortunately fall sick of an infectious disease while sojourning in an hotel. The noise and bustle of the establishment are the absolute reverse of the quietude and repose which are required for the careful treatment of the case; the difficulty in obtaining proper food, particularly that which, as beef-tea, requires special preparation, is notorious; and lastly, the heavy charges which in most cases are made by hotel proprietors render the whole business very serious for the patient or his friends, from the pecuniary point of view. Not that the landlord reaps any monetary advantage from his sick lodger; for as soon as it becomes known that there is a case of infectious disease in the house, the other visitors are apt quickly to seek other quarters.

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SHOULD the illness happen in an hotel in a foreign land, the miseries of the invalid are likely to be considerably accentuated; the language of the servants is not his own, and the charges are sometimes exorbitant, especially when the landlord considers himself justified in charging the sick man for the rooms vacated by the other visitors scared away by the fear of infection. With a full knowledge of all these details, the Section of Public Medicine at the recent meeting of the British Medical Association at Leeds passed a series of resolutions bearing on the subject, which deserve to be published far and wide, inasmuch as they provide for emergencies of the kind under consideration, and seem to be fair and practicable. It may be reasonably anticipated that these or similar resolutions will shortly be put into practice, both in England and abroad. When that desirable result comes to pass an end will arrive to many of the incidental troubles that beset those who are so unfortunate as to be laid up with an infectious disease in an hotel.

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HERE are some wise remarks made regarding a very common practice:—A chapter on the proper mode of carrying sticks and umbrellas would afford most persons material for profitable reflection. We have not space for such a chapter, but shall merely notice, with regard to the matter, a few instructive but easily forgotten hints of daily experience. The point, whether of stick or umbrella, figures prominently in the small accidents of every thoroughfare. It is carried or suddenly jerked behind one under an arm, and often painfully near to the persons of passers-by. It is heedlessly thrust in front by the arm of a rapid walker, or anon describes a circle, with some careless hand for the centre.

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IT travels swiftly upstairs at railway stations, performing an aggressive zigzag movement among the crowd of passengers. It forms the centre of the spread umbrella suddenly opened in the teeth of a stormy wind, and in the face of wayfarers. Its uncertain level threatens by turns a shin, a back, or a face, a child's mouth or eye, or the solid front of some portly citizen. "Beg pardon" readily follows if it strikes a mark, but a missing tooth is not so soon restored or a bruise reduced. In such matters no body of regulations can give security, but self-interest alone might teach the careless the duty of watching and guiding aright this apparently insignificant but seriously offensive point.

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OUR Paris correspondent, says the *British Medical Journal* (speaking of the unsanitary state of certain phases of the Paris Exhibition), writes that, since the case of poisoning resulting from drinking lemonade prepared in zinc pails, the use of metal vessels has been prohibited in the process of lemonade and bonbon making. The Adminstration of the Exhibition has issued strict orders that this prohibition shall be enforced. Perhaps this wise measure may suggest the framing of others, and some sort of supervision of the wines, meats, and hams, which are astonishingly abundant, but not always either of enticing appearance or odour. It would also be reassuring to the now cosmopolitan French public to have analysed the vast quantity of milk sold at the Exhibition, which is supplied by a comparatively small number of cows. Good and bad sanitation is involved in the simplest and most menial duties. It is for this reason that it would be wise to have a special staff of cup and glass wipers, so that, to quote from a contemporary, "they be not passed from one customer to another *without being washed or even rinsed.*"

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DR. H. MACDONNELL has recently been studying leprosy in Norway. Respecting the disease as there represented, he says that the steps which have been taken have proved most successful, and it is now merely a matter of time for the disease to be almost stamped out. All the specialists agree that hygiene carried out in the homes, with special attention to personal cleanliness and proper food would hasten this desirable end; but amongst so democratic a people it is difficult to pass any law trenching on the liberty of the subject. The difficulty of inspection and the insistance on sanitary measures are well-nigh impossible, owing to the great distances patients live from centres of civilization and the total interruption of all communication during the long winter months. The main factors in producing the disease (besides heredity) are filthy habits, bad food (mostly fish, salted or dried), the absence of sunlight for many months, foul air in stuffy and smoky cabins, insufficient heat and clothing, and the almost entire absence of green food or flesh meat.

COMPULSORY isolation, adds Dr. Macdonnell, can alone deal rapidly with such a condition of things. The Storthing has been appealed to in vain by sanitary reformers for more stringent measures than prevail at present. The existing arrangements are slowly and gradually working a vast improvement. It is probable a time may come when they shall have accomplished all the improvement they are capable of effecting, and a residuum of cases will remain. When that time arrives, the sturdy common sense of the nation will insist on such further measures of restriction as may be necessary to stamp out completely the disease, for one and all are agreed that stamped out it must be.

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A MOST admirable invention in the way of garters has been brought under my notice; and as ordinary garters are most hurtful and uncomfortable appliances from the fact that they impede and injure the circulation, my lady readers may feel interested in knowing of the new invention to which I allude. The garters in question are known as "Brooks' Patent." They are made by Mr. S. Brooks, of Mill-hill, Leeds, but can be procured of all drapers, I believe. The essential feature of these garters consists in their encircling only the front part of the leg, and are attached to the stocking either directly or by means of a piece of braid sewn on to the stocking itself. These garters are made in three styles, "wire," "plate," and "combination," and while they fasten easily, they can be tightened or relaxed at will. They support the stocking easily and perfectly, and thus do away with the trouble and inconvenience of suspenders. As hygienic appliances, I am pleased to be able to recommend Mr. Brooks' inventions.

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"OIL on troubled waters" has proved to be so efficacious in smoothing rough seas that mariners have begun to provide their ships with cans of fish oil and oakum bags, to be used in times of great storms against the buffeting of the waves. Science might have learned lessons from Dame Nature centuries ago, and utilized oil for the safety of all men who "go down to the sea in ships." Lieutenant Gibbons, of the navy, referring to the use of oil at sea, said a few days ago: "To close observers of sea-birds on their own element during bad weather it must have been shown that, however rough the ocean may be, where there are birds resting on the sea there is scarcely a ripple to disturb them. All fish-eating birds, cape-pigeons, petrels, &c., eject oil from the mouth when captured; and, doubtless, they adopt a similar expedient to aid them in stilling the waves when searching for food in the sea. In the South Atlantic and the South Pacific oceans I have frequently witnessed sea-birds floating in spaces of seemingly quiet waters, when the sea around was rough. The unusual smoothness of the water where the birds floated was evidently induced by the quantities of oil deposited by them upon the water, either voluntarily or involuntarily."

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WITH the next No. of HEALTH, commences our fourteenth volume. As usual, I have arranged what I hope may prove an attractive list of subjects for its pages. I shall esteem it a personal favour if my readers will use this opportunity for recommending HEALTH and its aims to the notice of their friends.

Original Essays

"Life is not to live, but to be well."—*Martial.*

SEWAGE SYSTEMS.

PAST, PRESENT, AND FUTURE.

By C. E. MUSE.

THE social observer cannot be said to have completed his survey of society unless he studies and rigidly searches into not only the outside show presented to the world's gaze, but also into all the depths and shadows which lie beneath the surface. The true philosopher makes it a most important part of his life's labour to pursue that which is evil, and to bring to the light of day that which is unclean, that they may be recognized in their true character and effaced from or improved out of existence. With this laudable object before us, a glimpse into the history and progress of that necessary evil, the sewer, which has become quite an institution of modern society, will perhaps not be considered out of place.

In considering the sewage systems of the past, the casual reader will possibly be surprised to learn how old is the idea of carrying off, by means of conduits, the superfluous water and the filth of cities. We find that in the ancient East sinks and sewers of a primitive kind were in common use. Tiglath Pilezer, according to the books of the Rabbins, swore by the sink of Nineveh. Mokannah, the veiled prophet of Khorassan, is traditionally famous as the person who used to make a false sun rise from the cloaca pit of Kekhschab. The multitudes regarded with an almost religious awe these hotbeds of filth—the very cradles of death. From these sewers and sinks pestilence was created, and they became the grave of all despots, so soon as they became too troublesome and tyrannous to live at peace with their subjects.

In the middle ages Rome had its sewers. They were executed at great expense, and were reckoned among the wonders of the world. They were so defective, however, that they were constantly needing repair. The sewers were not accommodated to the plan of Rome at all, but were carried hap-hazard in all directions, across the streets, and frequently passed under buildings, thus becoming the cause of most malignant fevers. It may safely be supposed that they were originally constructed for the accommodation of the city at a time when the principal inhabitants were herdsmen and banditti. This proves that although rude nations may execute in a magnificent style fortresses and temples for the purposes of war and superstition, they are far from adepts in the construction of simple works of convenience and cleanliness.

The sewer of Paris dates from the thirteenth century. In the past it was a terrible place. It was a sepulchre as well as an asylum. All that the laws of man pursued hid in this hole. The political exile as well as the vilest felon here found refuge. One hundred and fifty years ago the dagger thrust came thence, the pickpocket in danger glided thither. The sewer of Paris was the rendezvous of the lowest vagabonds of the time. It was very natural, therefore, that a swarm of traditions was all that respectable people knew about the sewer. The place became legendary. No one dared to attempt an examination, until one Bruneseau, in the year 1805, volunteered a campaign against the horrors of the sewer. It was a night battle against pestilence and asphyxia.

The visitation involved the cleaning of the place. The work occupied the seven years from 1805 to 1812. While the examination was going on, Bruneseau was busily engaged in laying out and completing extensions in many directions. Thus the tortuous quagmire of the ancient sewer, fetid, and all the more horrible because of the prevailing ignorance regarding it, became almost respectable in its correctness.

The sewer of to-day in all large towns is very much the same the world over. It is straight, cut by the line, neat, and cold. The masonry is a marvel of ingenuity. There is no danger of the quagmire engulfing the sewerman now; all is easy for him. And yet we find still a shrinking in the public mind from the idea of entering upon such a trade. Why is this? It is because the sewer of to-day is not to be trusted; miasmas still inhabit it. In vain have processes of purification been tried; in spite of them all it exhales a vague odour which gives out death. In view of this, and also the fact of the enormous cost of construction and maintenance, any improvement on the present system of the disposal of sewage will be hailed with delight by the general public.

One of the latest systems proposed is that of treatment of sewage by electricity. This is to be done in such a manner as to precipitate and purify the sewage, and to render it perfectly harmless. The sewage is pumped from the main sewer, and passes between iron plates transformed into electrodes by connection with a dynamo. The contact with these metal plates gradually resolves the sewage into its chemical elements. By a series of interesting processes these elements are liberated, and treated in such a manner that a form of sludge is all that is left. This may be pressed into cakes, or otherwise disposed of. The cost of this system, however, when compared even with the systems now in vogue, renders it at present practically impossible for common use. There is no doubt but that the disposal of sewage by these means would be a great boon to the public in some ways; and the proposed system appears to possess many advantages over chemical treatment.

It will be noticed, however, that not only in the usual system of throwing it into the sea, but also in the proposed new systems the outlay of an enormous amount of money is necessary for paying for the process merely of throwing our sewage away. The worst of it is, there is no possible return for the money thus wasted. It surely will not be argued that we get a return in good health. It is a well-known fact that our sewers are daily poisoning the rivers from which we are obliged to take our supplies of water. The Thames is notoriously poisoning London by the filth in it.

Why not endeavour to obtain some return for all the labour and money spent upon our sewage systems? It seems so absurd to be throwing so many millions away annually, merely for the purpose of carrying off the filth of our cities into the sea, when it might be employed *most usefully* elsewhere.

Victor Hugo has struck a keynote to this vital question, which has not had the attention it deserves. He says: "Science, after long experiment, now knows that the most fertilizing and the most effective of manures is that of man. The Chinese, we must say to our shame, knew it before us. No Chinese peasant, Eckeburg tells us, goes to the city without carrying back, at the two ends of his bamboo, two buckets of what we call filth. Thanks to human fertilization, the earth in China is still as young as in the days of Abraham. Chinese wheat yields a hundred-and-twenty-fold. There is no guano comparable in fertility to the detritus of a capital. A great city is the most powerful of stercoraries. To employ the city to enrich the plain, would be a sure success. If our gold is filth, on the other hand, our filth is gold."

This theory, with regard to the question of sewage disposal, is unfortunately not the commonly accepted theory. Instead of looking at the subject in a common-sense light, men still grope away in the dark. They propose system upon system, but they never take into consideration the millions which are wasted annually by throwing into the sea that which, if restored to the land, would suffice to reinvigorate and nourish the world. There can be no doubt, however, that, sooner or later, men will open their eyes to this fact. In the meantime, they will have the power to throw away manure worth millions of pounds; and also the power to *spend* millions in *throwing it away*.

So long as they remain blind to their own interests they will probably do this. They will also continue to spend thousands of pounds yearly in fitting out ships for South America, to gather the excrements of penguins and petrels, to manufacture guano; they are too blind to see they already possess in their own country manure of far superior fertilizing powers.

It is probable that no less than two hundred millions is the value of the liquidation made every year into the sea from the mouths of the English rivers. With this two hundred millions coming in yearly we could soon pay off the National Debt, and pay a large portion of the costs of government besides. We are too clever to do this; we prefer to throw it into the gutter. Two results come from this—the land is impoverished, and the water becomes the cradle of infectious diseases.

There will come a time when men will awake to their folly in the matter. It may be a rude awakening, or it may be simply the quiet outcome of the present discussion of the subject.

An arrangement of two tubes, fully equipped with valves and sluiceways, one sucking up the water and filth of our cities, and carrying it into the fields, and the other bringing the pure water into the cities, would be at once the simplest and best means of solving this all-important question. It does not come within the scope of this article to discuss the technicalities and difficulties in the way; but it may safely be said that they are very trivial compared with the good which will be done. The result will be that the products of the earth will be increased tenfold, and the problem of misery will become easier to solve. We shall also retain every year the two hundred millions which is now wasted. This simple act will prove an inestimable boon to mankind, physically, morally, and socially.

THE IMAGINATION AND HEALTH.

By Dr. Andrew Wilson.

(Concluded.)

Of the abuses of imagination, Sir J. Crichton Browne spoke wisely and well. "I have referred," he says, "to the alleged dangers of imagination as a direct morbific influence, and endeavoured to show that these are illusory; and I must say one word as to the alleged evils attending it, which make it a demoralizing agent, and therefore a harbinger of disease, for whatever demoralizes tends to upset the equilibrium of the nervous system. Like every good gift, imagination may be prostituted and abused; and, in the history of art, literature, and the drama, abundant proof may be found that it has been made to pander to vice and folly. But, when this has been the

case, it is not so much the imagination that has been at fault as a certain pestiferous element that has been infused into it. We do not blame the atmosphere for the impurities with which it is loaded in our large cities, and so we must not charge to the imagination the degrading and licentious suggestions of which it has sometimes been made the vehicle. It would be in vain to attempt to shut out from the masses of the people a knowledge of the tragic events and horrid turpitude of life; but everything depends on the way in which it is treated. Passing through the brain of a Walter Scott or a Dickens such knowledge becomes purified and protective, and has nothing but a wholesome effect when sown broadcast; but, passing through the brain of an Aphra Behn or a Zola, it grows infective and deadly, and disseminates a moral plague around. And thus ideas, like microbes, may by cultivation be attenuated and rendered harmless, or raised to a higher malignancy. The records of crime, when reported with prurient detail, and with a halo of romance thrown round them, have sometimes a pernicious effect, and tend to reproduce themselves. After the notorious Algerian case of Henri Cambige, which was treated by a section of the French press with almost doting fondness, there was a series of similar tragedies, and Robert Ferron, the Belgian, who shot himself and his sweetheart at Trent Junction in April last, was shown to be brooding over highly spiced accounts of the suicide of the Crown Prince of Austria. Men of taste and delicately reared imagination turn from such garbage with disgust, but there are always sickly and partially depraved natures ready to be powerfully affected by strong impressions of a criminal complexion."

The practical and every-day outcome of the question resolves itself into an inquiry into the effects which fiction and novel-reading (as illustrative at once of the most common product and incentive of the imaginative faculty) may be presumed to exercise on the minds of the people. "The profitable and hygienic uses of imagination," says Sir J. Crichton Browne, "are daily more and more widely realized, for in every country in Europe there is an increasing demand for what may be called imaginative aliments and stimulants. Picture galleries and exhibitions are thronged by ever-swelling crowds; concerts and musical performances enjoy an increasing popularity, and imaginative literature advances by leaps and bounds. The spread of education has opened up this latter source of imaginative recreation to the masses, and they are not slow to take advantage of it; but education has also opened up to them other departments of literature, and the fact that they do not avail themselves of these to anything like the same extent shows, I think, how keen the appetite for imaginative literature has become. In the free libraries of Birmingham during last year, 1888, there were issued to readers 347,334 works of pure fiction, and 20,634 works of poetry and the drama, to say nothing of magazines in which fiction and poetry bulk most largely; while in the same year there were issued just 18,214 works on theology and philosophy, and 86,942 on arts, sciences, and natural history. In sober-minded Scotland the thirst for imaginative literature has become generally prevalent. When the most important circulating library there was established fifty years ago, it was stated in the prospectus that novels were, with rare exceptions, to be excluded; and now novels constitute 63 per cent. of the whole issue of that library."

Clearly there is no lack of encouragement at the present time in the case of the writer of fiction; and there is no want of a desire on the part of the public to adopt fiction as a means of mind-culture. A further proof of the extent to which the imagination is utilized as a means of amusement by the people is given in the following words:—"That the craving for works of fiction is not only great but growing may be deduced from the figures given from time to time in that useful periodical the *Publishers' Circular*, showing the number of books of different descriptions published annually, and of new editions issued. Now a table which I have had constructed shows that, whereas in the six years from 1877 to 1882 there were 2,632 new novels published, in the six years from 1883 to 1888 there were 3,655; the increase, subject to some fluctuations, having been markedly progressive, from 446 new novels in 1887 to 926 in 1888. As the number of works of any class published is a fair indication of the demand for books of that class, it is clear that the consumption of light literature is largely upon the increase. Of course, in other departments of literature there has also been a large increase in the number of works published, but in none has the increase been equal to that in novels, while in some departments there has been a falling of. Of works on theology, of which 3,839 were published between 1877 and 1882, only 3,508 were published between 1883 and 1888; and of works on medicine of which 930 were published in the former period, only 912 appeared in the latter. It is impossible to get at facts as to the size of editions and sales of works of different classes, but it may be safely asserted that, as regards both of these, novels, as a rule, far outstrip any other kinds of books. The monthly sales of some of the early numbers of the 'Old Curiosity Shop' reached 70,000, and the figures representing the sales of 'Pickwick' from first to last would be startling could they be accurately set down."

Nowadays almost every great newspaper in its weekly issue feeds the taste for fiction; and on the Continent even the daily press supplies its instalment of some serial story or other. The lecturer seems to be fully aware of this great and growing demand for food for the imagination, for he adds that "the vast extension of the habit of novel-reading amongst us is also demonstrated by an observation of journalistic literature. Newspapers that at one time confined themselves to news, political commentaries, and criticism, now form syndicates to supply their readers with a modicum of fiction, and journals entirely devoted to fiction have an enormous circulation. One such journal, a penny one, and by no means one of the best known, had to my knowledge a few years ago a circulation of a quarter of a million a week, and no doubt, therefore, reached millions of readers, for such journals pass from hand to hand; and journals which combine fiction with fashion, which is imagination applied to personal decoration, are sold, I am informed by a high authority, in hundreds of thousands in this country weekly, and are exported in tens of thousands weekly to our colonies, being purchased both here and at the Antipodes chiefly by servant maids and shop girls. And that the demand for cheap fiction will go on growing can scarcely be doubted, for the monotony of life which the division of labour has so greatly aggravated, the aspirations which even a humble education serves to implant, and the increased mental friction which arises from the aggregation of masses of our people in large towns, all tend to whet the appetite for an imaginative diet. To us as medical men it is interesting to remark that this appetite is most urgent in spring, when nervous erethism exists, and 'a young man's fancy lightly turns to thoughts of love,' and is least pressing in autumn, when the nervous system

is comparatively quiescent. In the Birmingham lending libraries the issue of novels reaches its maximum in March—32,796 were issued in that month last year—and touches its minimum in August—27,140 were issued in that month in 1888—a difference of 5,656 in favour of March."

Without condescending to discuss Sir J. Crichton Browne's views regarding the seasonal variations of novel-reading, we may at least hold it to be fully proved that the culture of the imagination by fiction is, first of all, greatly on the increase; while secondly, its effects must be in the main regarded as beneficial. Doubtless there is much hollow sentiment and fantastic ideality taught and expounded by the cheap fiction of our day. But we may, at least, congratulate ourselves that the British novel, even if it be not of a very high class, is for the most part of respectable type. It outrages no public sentiment as a rule; it preaches virtue triumphant over vice and wrong as a usual matter. So far, it may be said to teach the people anew a very old law of morality, which the proverbial wisdom of our land has embodied in the saying regarding the high policy of being honest and true.

For the rest, and for educated persons, the imagination is a faculty of mind which raises us above life's cares, and opens to us the doors of fancy's realm. If only because it does distract our thoughts from the worries of existence, the imagination is a mind-faculty without which life would be poor indeed.

Educational Classes.—The London Young Women's Christian Association is again prepared with an attractive programme of evening classes for the coming winter. These classes are held at upwards of twenty Institutes in all parts of London and the suburbs, and the subjects taught include book-keeping, shorthand, type-writing, dress-cutting, cookery, ambulance, nursing, French, music, singing, &c. Certificates and seventy-two prizes are offered to successful candidates. Physical training and recreation, including gymnastics, calisthenics, musical and Swedish drill are provided at two excellent gymnasia in the City and West-end respectively. Classes to prepare candidates for the Civil Service are also held under an experienced tutor. A prospectus giving all information will be sent free on application to Mr. H. Kidner, 316, Regent-street, W.

One of the latest novelties in the application of electricity consists of an electric reading-lamp, which is being fitted to the carriages on the main line of the South-Eastern Railway. It is on the principle of the "put a penny in the slot" automatic machines. The apparatus is situated immediately over the passenger's head and under the rack, and is contained in a small box five inches by three. The light is of five-candle power, and is obtained by the introduction of a penny at the top of the box, and by a subsequent pressure of a knob, and will last for half an hour, extinguishing itself at the end of that time automatically. For more light more money has to be put in the box, but if the lamp is out of order the penny drops right through and the payer regains it.

London Necropolis, Brookwood, Near Woking, Surrey. The largest and most beautiful cemetery in England. Five hundred acres exquisitely planted. Simple funerals. Earth to earth coffins can be used if desired. Pamphlets gratis. Apply—Secretary, 2, Lancaster-place, Strand.—[Advt.]

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

A RETROSPECT OF SOME NEW DRUGS.

II.

Pinol.—Pinol is the pure essence or volatile oil distilled from the needle-like spills of the *Pinus Pumilio*, a small shrub that grows nearest the perpetual snow which covers the peaks of the Alps. It is distinguished from the common pine oils by superior medicinal and sanitary properties, and its exquisite delicious fragrance. The exhalations from the pine seem specially acceptable and refreshing to the sufferer from lung affections. Thousands of consumptives and rheumatic patients make for the pine forests of Europe and America annually, in order to find relief from their sufferings. Modern chemistry has given us the pure essence of pine forests, and has enabled us to bring their balsamic fragrance to our homes. The pine treatment is being extensively adopted in Homburg, Ischl, Reichenhall, and other health resorts of the Continent, where the *Pinus Pumilio* is used in one form or another. Pinol is used as an inhalation, gargle, embrocation, disinfectant, and also as an internal remedy. Pinol Vaporoles, consisting of a glass capsule containing the medicament, and enclosed in a beautiful silken sac, are used for inhalation and fumigation. Public speakers, singers, &c., have found that the employment of Pinol or Pinol Pastilles inures the throat to trying conditions and strengthens the voice.

Beef and Iron Wine (*Burroughs*).—This nutrient, restorative, and stimulant is a powerful blood tonic, and was, we believe, suggested by the distinguished Dr. Parkes. It is a food that has been the means of saving many lives in low states, as in typhoid fever, pneumonia, &c. It is said to be invaluable in malarial districts, where it is necessary to keep up the tone of the system. Its flavour is acceptable to the most delicate, and is specially liked by children. The preparation does not injure the teeth, constipate, or in any way disagree. The same aliments as it contains, if given separately, would in many cases cause untoward symptoms and be badly tolerated. The tonic and stimulant properties of this food are made substantial and permanent, being reinforced by the presence of beef.

Lanoline.—Lanoline is the purified fat from sheep's wool, and was discovered by Professor Liebreich of Berlin. Impure fat, obtained from wool, was used for cosmetic purposes by the Roman ladies, in spite of its repulsive nature, in the days when Rome was mistress of the world. Wool-fat, or Œsypus as it was then styled, is mentioned in the writings of the famous historians Herodotus, and Pliny; and Ovid, in his "Art of Love," avers that the Roman ladies anointed their faces and skin with Œsypus brought from Athens. Modern chemistry has now given us a fat which is natural to the skin, and to which Professor Liebreich has given the name of "Lanoline." This preparation is free from fatty acids, and never turns rancid, thus differing from ordinary fats. Among the many preparations of this product exhibited at the meeting of the British Medical Association, recently held in Leeds, we noticed Lanoline Soap, Lanoline Cold Cream, and Lanoline Pomade, the latter of which has been acknowledged by the highest authorities as the natural unguent for preserving the hair. Dr. W. Allan Jamieson, the eminent authority on skin-diseases,

says: "The fatty acids produced by the decomposition of oils and fats are peculiarly injurious, and it is to be feared that the existence of such in many of the ordinary pomades is only concealed by the perfume." Toilet Lanoline in collapsible tubes was also shown. This unguent is excellent for use after sunburn, or for excoriations of the skin.

THE ELIXIR OF LIFE.*

By WILLIAM A. HAMMOND.

(Surgeon-General of the United States Army, Retired.)

(Concluded.)

The discovery of the virtues of Peruvian bark and its alkaloids in the treatment of malarial affections was also a matter of pure empiricism. The anæsthetic properties of cocoaïne could not possibly have been deduced from a knowledge of its chemical composition or of its action upon the organism when taken into the system. The like is true of mercury, the bromides, the iodides, and many other remedies without which at the present day it would be impossible to practice medicine successfully. The "elixirs of life" composed by Paracelsus, Roger Bacon, and others, consisted of substances chosen mainly by caprice or from some fancied analogy with the principle of life, the powers of which upon the human system were wholly unknown.

The object of true science is, of course, to lessen the domain of empiricism, while increasing that of rational therapeutics; but, at the same time, it must be borne in mind that the first object of the physician is to abolish suffering and to save life, and that for the accomplishment of these ends he is justified in using any means that, with or without reason, he thinks may be of service. Take, for instance, such diseases as hydrophobia and tetanus, from the first-named of which not a single case of authentic recovery is on record, and from the second of which the cures are almost infinitesimal in number. To experiment in the treatment of either of these diseases is a physician's bounden duty, for there is no known remedy for either of them. Of course, the scientific physician experiments in a more rational way than does the sciolist. His knowledge of anatomy, physiology, pathology, and of the general effects of medicines, gives him a great advantage over the ignoramus; and, if his patients recover, he is careful how he ascribes the result to his treatment rather than to the inherent forces of nature residing in the patient. But it has often happened that the ignoramus has hit upon a remedy for a hitherto unmanagable disease, when science, with everything in its favour, has ignominiously failed.

Again, a physician carefully studies the nature of the disease in regard to which he sets out to obtain a cure. He observes its course as it affects the lower animals; he makes dissections and brings all his knowledge of chemistry and microscopy to bear upon the point at issue. He makes his experiments in the first place in his laboratory with medicines the action of which are in a measure known to him, and which he has, therefore, reason to suppose he may find to be of value. Thus we will imagine a patient to be suffering from congestion of the spinal cord. We want a remedy that will lessen that congestion by constringing the blood-vessels. It has long been known that ergot has the power of contracting the organic muscular fibres of the uterus. The muscular fibres of the blood-vessels are of the kind called organic, and differ from the muscular tissue of the arms and legs, for instance, in the fact that they are not under the control of the will, and that, unlike these latter, they are not marked with transverse striæ. There is, therefore, some reason to suppose that ergot might contract the blood-vessels, and hence be of service in the treatment of spinal congestion.

But the evidence is not yet quite complete, for the organic muscular fibres of the uterus may be one thing and those of the blood-vessels another, in some way unknown to us, although they look precisely alike when examined with a microscope. Now, we take a frog, examine the web of his foot with a microscope, and then put a little ergot into his stomach, and in a short time we see the blood-vessels of the part contract, and in some cases become so small as not to admit of the passage of the blood corpuscles. This is additional evidence, but there is still more to be had. We expose the spinal cord in a dog, and then dose it with ergot. We see that a like result takes place as in the frog, for under its influence the blood-vessels of the part become smaller. We repeat these experiments many times, and then we are justified in saying that ergot contracts the blood-vessels of the spinal cord. Still we are not yet sure that its action in a diseased cord will be similar to that in a healthy cord. We give it to a patient who is suffering from congestion of the spinal cord, and he recovers; and yet we are not sure, for the result may have been due to some other agent of which we have no certain knowledge. We repeat the experiment again and again. Sometimes our patients are cured, and again we fail. The failures may be due to the fact that all people are not alike, and that the system of one absorbs the medicine while that of others does not; that the disease may have advanced so far as to be beyond the reach of any remedy, or that we have made a mistake in our diagnosis and have had to deal with some other disease than spinal congestion. So that, after all, the most that we can say in regard to the matter is that ergot is beneficial in some cases of spinal congestion.

Within a few weeks intelligence has been received in this country that Dr. Brown-Séquard, of Paris, certainly the most eminent living physiologist, especially so far as the nervous system is concerned, has been experimenting with the expressed juice of certain glands of the body with a view to discovering its effects when taken into the human system. The newspapers (not Dr. Brown-Séquard nor any other, authority, so far as I know) have designated this juice the "Elixir of Life." As a result of his investigations he announced in an address delivered before the Société de Biologie, of which he is president, that, after a dozen or more injections under the skin of his own body of the juice from these glands taken from guinea-pigs and rabbits, he experienced a change that might almost be regarded as a rejuvenation. Dr. Brown-Séquard is seventy-two years of age, and he says he felt as though a weight of twenty years had been lifted from his life. He refers to other experiments performed upon the lower animals, all apparently leading to similar results. In addition, Dr. Variot relates the details of three cases of old persons in which, under like treatment, like effects to those obtained by Dr. Brown-Séquard were produced.

The first information received in this country of Dr. Brown-Séquard's researches was through a telegram to a New York newspaper, conveying such imperfect details, however, that the writer was disposed to question either the authenticity of the report or Dr. Brown-Séquard's mental equilibrium. It was apparently stated that

* See also HEALTH No. 331 ("Can We Arrest Old Age?") and No. 333 ("On Getting Old") for articles on this topic.

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various glands of the body were used in his experiments, and that Dr. Brown-Séquard had suddenly become a very much younger man than he had been. Further information, however, showed the exact nature of his experiments and of the claims which he had set up in their behalf. The writer therefore determined to examine into the matter for himself, and as the result of his investigation he is enabled to give, in such general terms as are suitable for a secular journal like the *North American Review*, a confirmation of Dr. Brown-Séquard's statements, so far as his researches have extended. And not only this, but he has apparently shown that muscular rheumatism of long standing has been entirely relieved after a single injection of the juice in question. He has been careful to state, and he still so declares, that all the experiments performed up to this time are not sufficient to establish the claims of this glandular juice as an alleviator of old age or a curer of any disease whatever. The whole matter is yet in its experimental stage, and it will there remain until the subject has been examined into by many physicians under different circumstances, and a general coincidence of opinion obtained. A large part of the newspaper press of the country, with the sensational head-lines which they put to every communication on the subject, have done everything to give that exaggerated idea of Dr. Brown-Séquard's investigations which they now affect to deplore.

Now, Dr. Brown-Séquard did not go blindly to work with his experiments, for every intelligent physician knows the relation which exists between the glands in question and the mental and physical condition of the animal to which they belong. There is much *à priori* reasoning to support the conclusions at which he has arrived. They are not based upon empiricism, but are rational investigations carried out with intelligence. Whether or not he has made any permanent addition to our means of assuaging the infirmities of old age or of curing disease, time alone can show. But those physicians who denounce honest investigation in this or any other direction are unworthy of the profession to which they belong, and should be relegated to some limbo where they can enjoy their self-satisfaction without coming in contact with their more energetic brethren. — *North American Review.*

The Bishop and the Bores.—Here are two stories of a well-known English prelate whose name may be guessed. To a man who had been bothering him for promotion till he lost temper he said, "Dear Sir,—If it were to rain rectories and shower vicarages, I should present you—with an umbrella." To another who said, "My lord, when I write you you answer me on miserable scraps of paper." "Very well, sir; next time I reply to you it shall be on foolscap."

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THE SKIN AND THE HEALTH.

There is no greater delusion abroad than that which asserts that it is possible to make the skin beautiful, clear, and attractive by means of washes, lotions, paints, or powders. Any one, it is true, may impart to the skin any tint or hue of artificial kind, but this can never even counterfeit the "rosy bloom of health." To see some ladies, first plastering the skin over with paste, and then powdering their faces until they literally shine with a vivid violet colour, shows at once a singular want of good taste, and an equally lamentable ignorance of the fact that a healthy skin can only be the product of a healthy body.

Let us be clear on this latter point at least. The skin is part and parcel of the body. It is really a lung, spread over the body's surface, and performing the same work as the breathing-organ, namely, the getting rid of waste matters from the blood. If the skin be "pomaded" and powdered, its pores must in consequence be stopped up, and as its functions become deranged, the beginnings of skin-ailments appear. If we add the fact, that skin-powders and pomades are, as a rule, very expensive, and sold much above their intrinsic value, we have said enough to show the supreme folly of civilized women imitating their savage sisters.

The simpler the remedies we employ for the care of the skin, the better will it be for the skin's health. We say to our lady-readers, avoid face-powders, and eschew face-pastes and lotions. If you are healthy, you need them not; if you are unhealthy (as regards the skin), they will only make matters worse. Use a pure superfatted soap, such as Vinolia Soap, for washing, and wash preferably with soft water. If the water is very hard, soften it with the powder to be had of any chemist. If you feel the cold irritating your skin, rub a little Vinolia itself on the face at night. This is a pure, fragrant, and sanitary application, which contains nothing that will injure the most delicate skin, and which prevents excoriations and roughness.

The Best Cure for "Clerical Sore Throat."—The *Guardian* remarks that few things are more distressing than to hear, as is not unfrequently the case, of deserving clergy who for years have had no holiday. At this time of year, when among the crowd of holiday-makers who are to be met at home and abroad, none enjoy themselves more heartily than the hard-working clergy, it ought to be remembered that those who are able to get away from their work for a time do not include all those who deserve a holiday. As very often happens, the deprivation falls heaviest on those who are least able to bear it. It is the clergy who are single handed because of their poverty, who are naturally unable to afford the expense of a holiday, to say nothing of a *locum tenens*. And it is precisely in these cases that the pressure of work and of anxiety needs most the relief of change of scene and of thought. As many people know, there is a fund already in existence for providing holidays for poor clergy, and its work is so excellent, and the object so deserving, that we need hardly commend it to the charitably disposed among our readers. But it is, unfortunately, limited to the London clergy. Though it may be liable to abuse, the object we have described is so good a one that we hope those who wish to benefit the clergy and to promote the efficiency of their work will not forget among the other calls upon them the importance of something in the nature of a Clerical Holiday Fund.

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A SUFFERER from obstinate sciatica for six months, narrates the results obtained in his person by the method brought to the notice of the Académie des Sciences by Dr. Cowded. It consists in enveloping the affected limb in a thick layer of flowers of sulphur. The morning following his first application he remarked a distinct increase in the pain, and consequent functional impotence of the limb; but three days later, not daunted by his experience, he tried it again. This time his courage was rewarded by marked relief, and a week later all that remained of the sciatica was a slight "sleepiness" of the limb. This, however, disappeared entirely after a third application. The local irritation caused by the sulphur was practically *nil*, but he remarked a very powerful and disagreeable odour of sulphuretted hydrogen from the skin and urine. Ten days after the cure of the sciatica an acne-like eruption made its appearance on the forehead and temples, and in three days the whole face was covered, and the skin over the body itched and smarted. This symptom, however, had completely disappeared at the end of eight days. He then made another application of sulphur, in order to test its relationship with the eruption, and, surely enough, the eruption reappeared at the end of a week; and, though less severe, was longer in subsiding.

✣ ✣ ✣

M. VIGIER recommends the following preparations for the treatment of chronic cold in the head:—Tincture of pulsatilla, prepared with equal parts of the fresh plant and alcohol at 90 degs., given in doses of from a drachm and a half to three drachms daily, in water. As a snuff, he uses one part of anemonine in nine of sugar, and this active principle may also be given in the form of a pill: anemonine, one-sixth grain; pulv. glycyrrhizæ, one-third grain; syrup, a sufficient quantity for one pill. Two to four daily. As the anemonine loses its properties on drying, preparations should always be made with the fresh plant, and, when given internally, it is best given in a syrup of orange flowers.

✣ ✣ ✣

OXYGEN, says an author, is best obtained for medical purposes by the decomposition of chlorate of potash by heat. It may be administered in inhalations in the dose of twenty to thirty litres daily, half in the morning and half in the evening. From its action in health it is to be considered as a stimulant and tonic. It is very useful in the obstinate vomiting of pregnancy, and in atonic dyspepsia. It is efficacious in asthma depending on bronchial catarrh or pulmonary emphysema; in other pulmonary affections its efficacy is more doubtful; in tuberculosis its administration is not unattended with danger, and in asphyxia its employment is difficult. In albuminuria and saccharine diabetes oxygen is to be considered as an auxiliary to general medication rather than as the sole treatment. The true indication for inhalations of oxygen is to be found in processes characterized by deficiency in some of the principles of the blood, as in anæmia and chlorosis; in these affections it is to be considered as the best method of treatment.

✣ ✣ ✣

SEVERAL years ago, Dr. C. W. Prentiss, of Washington, D.C., published a case in which he thought the use of jaborandi caused white hair to resume its natural dark colour. He now reports another case, the patient being an old lady with Bright's disease.

✣ ✣ ✣

IN 530 cases of acute rheumatism collected by the British Medical Association, treatment with salicylate of sodium failed in but 24. In prescribing the salicylate of sodium, it is well to know that a pleasanter and more efficient preparation can be secured by prescribing the acid neutralized by sodium bicarbonate than by using the commercial salt. A solution of five scruples of salicylic acid in two ounces of mint water, to which is slowly added one drachm of bicarbonate of soda in two ounces of mint water, makes a mixture of which one tablespoonful represents fifteen grains of sodium salicylate. Prepared in this way, the remedy is more palatable on account of the carbonic acid present, and it seems to be more efficient, possibly because of the superior powers of the nascent salt.

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IT is a mistake to suppose that because milk is a liquid that it is at the same time a drink capable of satisfying the thirst of infants. Although milk appeases hunger, it makes thirst more intense after it remains some time in the stomach, and its digestion has begun. It is thirst which causes healthy breast-nourished infants to cry for long periods of time, in many instances. There are many cases of indigestion due to weakness of the child's gastric juices, or insufficiency, which would be greatly benefited or even cured if the child were allowed an occasional drink of water.

✣ ✣ ✣

ASTRINGENT washes prevent the formation of bed-sores. Dr. Walker uses a 1 per cent. solution of chloral hydrate, with very beneficial results, in the treatment of bed-sores. The parts were thoroughly syringed, washed, and dressed in chloral. Special care should be exercised by the physician to *prevent* the formation of bed-sores, by daily examination and prompt resort to astringent antiseptic dressings. Many a patient who has passed safely the crisis of a disease has died from the fearful sufferings following upon the formation of bed-sores.

A HOUSE-FLY EPIDEMIC.—A common appearance upon window-panes in autumn is that of dead flies, each surrounded by a cloudy spot. These insects are the victims of a bacillus or microscopic fungus, whose scientific name is *Empusa muscæ*, which is nearly related to the mould which attacks bread, and also to the silk-worm fungus so much dreaded by silk culturists. In autumn the spores of *Empusa muscæ*, floating in the air, come in contact with the soft bodies of the flies, into which they sink their roots, or, rather, develop that branching, net-like growth known as mycelium. As the growth extends through the body, the insect loses the power of flight, and settles down to die on the window-pane. The fungus continues its growth in the dead body, and scatters its spores in all directions, forming the cloud-like spot which surrounds the insect. Other flies visit the pane, and the spores find lodging between the abdominal rings and in other unprotected parts of their bodies, and thus the disease spreads, sometimes to an enormous extent.

SPECIAL NOTICE.—The BEST stimulant for dietetic and other purposes is the "SKERRYVORE" (Registered) Blend of Fine Matured Scotch Whiskies, certified of the UTMOST PURITY by Mr. E. G. Clayton, F.C.S., Member of the Society of Public Analysts. Sold only by JOHN TWATT, 36, Argyle-place, Edinburgh. Price 20s. per gallon, bottles and cases included.—[ADVT.]

Public Health

"Health is the first Wealth."—*Emerson.*

COMMUNICATION OF INFECTION.

FROM the number of cases reported of infectious diseases that have been communicated through articles that have been in the possession of those afflicted with such diseases, it would seem that greater attention should be given this matter. The virulence of many disease germs has been shown to be of long life, capable of being transmitted through many years. Cases of scarlet fever, diphtheria, and typhoid fever have been reported in which the infection was communicated by articles that had been possessed by the sick years before.

While the matter has not been fully and systematically investigated, many cases have been reported to show that in such articles lies great danger. In cases of small-pox and yellow-fever, infection by this means is considered well enough founded and dangerous enough to make the destruction of clothing and all articles exposed to infection imperative by a general law of health departments. If such articles are not burned, they must be subjected to disinfection by steam at a high temperature. The danger of infection from these diseases is more noticeable on account of their epidemic nature and great fatality. Other less fatal diseases bear the same general law of infection, and in the aggregate—in their continuous and silent work—reap a greater harvest of death than do the epidemics that make charnel houses of our cities in a day.

When we recognize the great extent to which infection is liable from this source, we cannot but express surprise that some means of investigation has not been instituted to discover at least the liability of such infection and its extent. Our public and circulating libraries, "second-hand" book, clothing, furniture, and other stores, are all means by which disease germs could be communicated. Dealing in "second-hand" goods has grown to such an extent that almost all communities have representatives in their midst. One can scarcely go through a city without passing these stores and finding the side-walks lined with their goods. The purchaser knows nothing about his goods. They are most generally brought to him; a price is agreed upon, and that is all there is of it. The articles may have been the possessions of a scarlet fever or small-pox patient, but it is all the same. Take the article of clothing. Goods may be on the tables of the "second-hand" dealer or broker which could have hung in the room of one afflicted with some infectious disease for weeks, and no one who may want to purchase, or even the dealer himself, know of it. Or there may be the furniture or even the bed and bedding on which the patient lay. Who can say that all of these outbreaks of infectious diseases which have been called "spontaneous" have not had their origin from this source? Cases are reported and seem well authenticated in which scarlet fever and diphtheria have been carried from one house to another by birds in gathering material for nests from the premises of the afflicted house and depositing it on the window-caps of the other. If this is true, is it not reasonable to suppose that any contact with such infected articles is dangerous?

Probably the most danger lies in books. With most patients there is a time in their sickness when they want books with which to pass the hours of convalescence. The home library seldom is sufficient, and the public or circulating library is resorted to. The book goes from the patient's into another's hands, bearing all the seeds of disease of which it is capable. Either there is danger of communicating disease in this way, or the germ theory is a failure.

This matter has been deemed of such importance that in many European countries extensive investigations are being made regarding the infectiousness of books handled by the sick. The investigations should extend to all "second-hand" goods, and be conducted with great care and minuteness. In commenting on this subject, the editor of a Norwegian sanitary journal gives the following personal experience, which is but one of similar cases reported:—"In 1846 an eight-year brother of my wife was taken down with scarlet fever and died. During his illness he frequently amused himself by looking over a large picture book. This, together with several other of his useful playthings, was packed away in a chest after his death. Twenty-six years afterward, in 1872, a sister-in-law of mine journeyed across the channel to England, where I was then residing, and with her came the chest and the picture-book. On the second day the chest was opened and the book presented to my two-year old son. Within the next two weeks the little fellow was taken down with scarlet fever. The doctors who were called in consultation wondered how the disease was contracted, as there had been no scarlet fever in the town for years. The circumstances of the book were called to mind, and the indications were clearly that the twenty-six year old book had retained the poison and communicated it to the child."

Had not this book been mentioned and its history given, here would have been a case of "spontaneous" scarlet fever.

In Denmark and Norway the process of disinfection now in use is said to be effective without doing any damage to the books. It is used in many of the circulating libraries and bookstores, and consists in placing the books, fully opened out, in a suitable compartment and subjecting them to dry, hot steam of the temperature of 100 degs. C. for several hours. Clothing and all other articles once used should be subjected to some sure process of disinfection before they are allowed to be placed on sale or in any way exposed.

Phthisis is said to be communicated by sweepings from carpets in the rooms occupied by such patients, yet "second-hand" carpets are not only placed on sale, but hung out of store windows and displayed on the side-walks, and no one knows how contaminated they may be from the expectorations of the consumptive. It seems that investigation could find many important and interesting facts in this field.

SPECIAL HOSPITALS FOR CONSUMPTIVES.

IN a communication to the *Journal d'Hygiène* Dr. Charles Giorgiere, secretary of the Florentine Society of Hygiene, advocates special hospitals for consumptives, or, if the finances of the city will not permit this arrangement, patients suffering from this disease should be placed in airy, well-ventilated wards, so situated as to be completely isolated. He recommends thorough disinfection of every article used about the patient or in the sick-room, as well as the room itself. The care of the patients should be entrusted only to healthy and robust persons who have passed their thirtieth year, thus lessening the probabilities of communicating the disease. These measures, he believes, will no doubt greatly diminish the number of cases of tuberculosis.

Other physicians of equal note oppose the theory of contagion by the atmosphere, and cite, in support of their position, the result of experiments made by Tyndall upon respired air. Having demonstrated that air after having passed through the lungs is optically pure, that is, that it is deprived of every suspended particle capable of diffusing light, MM. Strauss and Dubreuih, after various experiments confirming this theory of Tyndall's, arrive at the conclusion that respired air is almost completely deprived of microbes. The lungs, then, are really a filter for the micro-organisms. Thus men or animals confined in a small space, far from infecting the air with their breath, really, so far at least as microbes are concerned, purify it, as air exhaled from the lungs contains fewer microbes than when it entered them. This does not contradict facts formerly stated that microbes are most abundant in crowded rooms. The act of respiration does not interfere with this; it is not by the breath that the surrounding atmosphere is charged with microbes; it is by the clothing, by the dust, by the expectorations which, dried upon the floor, float about in a pulverized state, that effects the dissemination of microbes in the air. The breath of man brings its contingent of injurious gases, but it tends to purify the air from the microbes it contains.

After granting the arguments of these doctors, the theory of contagion by association still remains not disproved.

Two cases of cholera, one of which ended fatally, are stated to have occurred in Hungary, near the Austrian frontier.

EXPECTATION OF LIFE.—Mr. Thoms tells us that down to 1872 the records of insurance companies showed that one death among the assured had occurred at 103, one in the one-hundreth, and three in the ninety-ninth year. The experience of the National Debt Office, according to the same authority, gave two cases in which the evidence could be regarded as perfect; one of these died in the 102nd year, and the other had just completed that number. In the tables published by the Institute of Actuaries, and giving the mortality experience down to 1863 of twenty life assurance companies, the highest age at death is recorded as ninety-nine, and I am informed by the secretary of the Edinburgh Life Office, that from 1863 onwards that age had not been exceeded in his experience. In the valuation schedules, which show the highest ages of existing lives in various offices, the ages range from ninety-two to ninety-five. It is true that one office which has a large business among the industrial classes reports lives at 103, and in one instance at 107; but it must be remembered that among those classes the ages are not nearly so well authenticated as among those who assure for substantial sums. There is, moreover, another source of error connected with the valuation schedules. When a given life is not considered to be equal to the average a certain number of years is added to the age, and the premium is charged at the age which results from this addition. It follows, therefore, that in some cases the ages given in the schedules are greater by some years than they really are.—*Dr. Roose.*

CHEMICAL ANALYSIS.—DR. DRINKWATER, Lecturer on Chemistry in the Edinburgh Medical School, undertakes the Analysis of Water, Foods, Wall-Papers, and of all other products and articles connected with Household Health and Commercial Interests. Terms on application to Dr. Drinkwater, Chemical Laboratory, 41, Chambers-street, Edinburgh.

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"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

TORTURING AND STARVING FISH.

By J. LAWRENCE-HAMILTON, M.R.C.S.

IT is sad to relate that in the fish trades of the United Kingdom those professionally and pecuniarily interested and engaged in fish torturing and in fish starving have, in the ignorant thoughtlessness of chronic custom, been alike blinded to the sacred civilizing duties of humanity and Christianity, and at the same time have overlooked and omitted their own material profits and advantages. I shall show that fish starving is a domestic sport which simultaneously diminishes the commercial value of the fish; it ruins the flesh, flavour, and firmness of the fish; it tends to induce parasitic, bacterial, and other diseases in the fish; it diminishes the weight of the fish, and increases its cost both to the professional fish starver and to the consumer—the general public. Fish so starved are more liable to rapid decomposition soon after death, and in codfish such starved fish are more difficult to crimp, which are additional causes and circumstances tending to enhance the avoidable risks of the present fish trade, and therefore an unfair tax on the consumer. The average absolute loss in weight of codfish by starvation and imprisonment appears to represent ten per cent. of the entire weight of the natural normal healthy fish, a heavy avoidable commercial loss. The close confinement of codfish in their fish chests sunk in the fish docks causes a rapid increase in the relative number of bacteria always present in the blood of living fish, and when the proportion of bacteria exceeds that which the blood of living fish can tolerate, then the fish commences to sicken and will often die, even if well and regularly fed in a fair amount of space, as in the well-cared-for fish kept in aquaria but too often illustrate. Hence it is that these sunk fish trunks become the rapid carriers of contagious disease to any healthy fish which may chance to be in or near the fish chest.

It is known that fish, in addition to tolerating in health a certain proportion of bacteria, are also, up to a certain point, equally tolerant of various external and internal parasites, and generally every fish dissected shows either some parasites—as tapeworms—in its intestines, or other parasites about its gills, eyes, skin, or elsewhere, and even sometimes as many as fifteen different species of parasites have been discovered in one individual fish. Often these parasites, along with the bacteria, increase so as to gain the battle over the fish, especially when the latter becomes weakened by starvation, confinement, injury, or other causes tending to diminish its vitality. Parasites also promote decomposition the moment the fish dies. These sunk fish chests never err on the side of cleanliness, and are hence favoured localities for hatching and breeding bacteria and parasites especially destructive to fish health and fish life. Later I hope to be able to publish a detailed illustrated pamphlet on this subject. The loss of life in codfish caught in the nets will not average upwards of five per cent. Hooked fish on being drawn up are liable to disgorge or vomit not alone the contents of their stomachs, but also, especially in the case of deep-sea and

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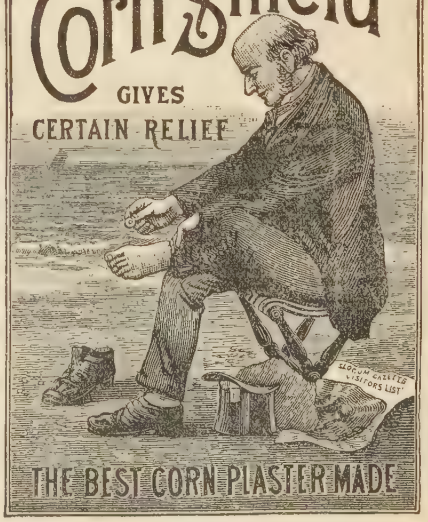

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The price of numbers 1–156 has been increased to 4d. each, as, in consequence of the great demand for them, they are now nearly out of print. Nos. 157 to date may be had, price 2d. each.

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abyssal fishes, to have their stomach and part of their intestines protruded through their mouths. Deep-sea and abyssal fishes, fish having air-bladders, by the rapid altered pressure, together with the influence of shock, get their air-bladders so dilated with evolved gases, that they are unable to sink from the surface of the water in welled smacks till the fishermen, passing a long needle through the walls of the fishes abdomen, or the pit of the left pectoral fin, by letting the gases escape, allows the fish to assume its natural habits. Hooked salmon vomit through fright alone. Fish may be sometimes seen with a prolapsed and protruded rectum and lower intestine, which appears to be due to relaxed flabby muscles, and is a sign which very shortly precedes the commencement of decomposition. As a rule, hooked fish keep longer fresh than netted fish. Netted fish, owing to being long injured by having been trawled over rough grounds, together with the sharp prolonged squeezing and banging about which they get in the nets, are like over-driven cattle, especially liable to early decomposition.

Much of the so-called best prime "live" codfish at Billingsgate has after capture been transferred into welled smacks which accommodate from about 600 to 1,000 codfish, each weighing from sixteen pounds to twenty pounds avoirdupois, where, especially in rough weather, after having been subjected for a few days to injury, confinement, and starvation in the welled boats, to prevent these fish from eating one another they are sometimes specially secured by their tails. On arriving in port some forty of these codfish are tightly crammed into a fish chest, which is sunk in the fish dock (which in England answers only during the cold weather, from about November till April), where the codfish, after further confinement and starvation, all die within a few weeks. If the fish be kept for a shorter interval—say, a fortnight—then on an average only about ten per cent. of such codfish are found dead upon opening the raised chest. All such starved, closely-confined codfish lose much of their natural healthy flavour, firmness, weight, and plumpness. The fish having to support life, consume much of the substance of their own livers, which appear small and shrunk when compared with the normal liver of a freshly-killed healthy fish. Consideration of the chemical and microscopic changes thus artificially induced I propose to postpone for a subsequent occasion. This codfish, if not previously dead, is then stunned with a blow from a big mallet, and thus, while insensible, crimping is alleged to be carried on. As the sensibility never returns there is practically no cruelty. Skate are said sometimes whilst still alive to be crimped by fishmongers. So long as cod will "crimp," or show muscular contraction it is called in the fish trade "live cod," an intentional misrepresentation. Out of its healthy season, a woolly, watery codfish is often appropriately termed by the fishermen "churchyard" cod. Recollecting these facts, the familiar dry, flabby, cotton wool-like taste of the vaunted best prime "live" codfish so often sold at Billingsgate and elsewhere is easily explained. Skinning live eels and gutting live fish, causing avoidable, useless torture, are occasionally practised.

Lobsters and crabs are often kept alive on wet seaweed or ferns, and live on an average in hampers for a couple of days, starving before they reach the fishmonger, who frequently keeps them, if not sold, till they die of starvation. Lobsters and crabs thus starved to death lose weight, firmness, taste, and flavour, and immediately on death tend to decompose rapidly, which in such conditions is but slightly diminished by boiling in salted water, instead of puncturing their brains with a stilleto, wriggled about so as to break up the animal's brain material, and then plunging the crabs and lobsters into boiling water, out of sheer thoughtlessness and careless custom, living lobsters have been placed in cold water which, while it is being heated up to the boiling point, causes the animal unnecessary and easily avoidable torture, for if plunged into boiling water it quickly dies. However, previously to boiling crabs and lobsters to rid them of sand and dirt, they should be well washed in fresh flowing water. Although no fish or shell-fish is legally protected against cruelty in this country, and although it is not punishable to boil fish alive, to roast fish alive, to slice fish alive (as turtle used to be in Ceylon, and as some air-breathing fish carried about in earthen pots in China are still), yet it is to be expected that these cruelties will rapidly disappear as soon as fish traders find that humanity to animals will benefit their own pockets. Codfish would keep in excellent health and condition if kept free in artificial ponds or docks fed with sea water, as was the custom among the ancient Romans and ancient Egyptians. The present St. Petersburg fish farms or ponds, fed by the river Neva, and where each species of fish has a separate compartment, yield profitable rentals. Lobsters and crabs can be fed on almost any fish refuse. The English law is curious as regards cruelty to animals. Scratching a tame rabbit so as to draw its blood is punishable with three month's imprisonment with hard labour, whilst the law permits any one to roast a *wild* rabbit alive without any interference. Possibly the Legislature considers fish as wild animals, and therefore beyond and outside the jurisdiction of the law courts.—*Lancet.*

THE VALUE OF SUNSHINE.

That the sun sends us heat and light is obvious to everyone; but the wonderful radiant energy which is constantly reaching the earth from the great central member of our system, contains other forces, some of which we recognize, and, probably, others of which we still remain in ignorance. That there is chemical or actinic power among them, every photograph is a proof, as well as the fading or darkening of dye-stuffs under their influence, and the more the subject is studied, the more complex seems the message which comes to us across the celestial spaces, without wire or battery to transmit it.

The physiological and hygienic influence of sunshine cannot be doubted. Whether they are due to the actinic radiations, or to other manifestations of energy having a more positive action upon the animal organism, may be considered uncertain, but that there is such an action is a well-known fact. Vegetable life cannot exist without light. The potato sprouting in the cellar instinctively sends its shoot in the direction of the nearest crevice through which a ray of light may find its way, and the plumule of the sprouting seed, no matter in what position it may have been originally planted, grows upwards towards the light and air with absolute certainty and exactitude. Every gardener knows that direct sunlight, and plenty of it, is absolutely necessary to his plants if they are to flourish and bear flowers, and the shade of a few small trees is enough to destroy even such vigorous plants as the grasses of our lawns.

Mankind are constituted with greater adaptability to varying conditions; but they, nevertheless, are dependent in a great degree on the health-giving influences of sunshine. Children raised in the dark, fog-laden atmo-

sphere of a large city like London, are puny and sickly, and cannot obtain the bodily development and vigour of the more fortunate child of the suburban or rural districts. The inhabitants of large cities live under unfavourable conditions, and must be constantly recruited from the country, in order to increase in numbers.

But even in localities where sunlight is always to be obtained, its benefits are not always appreciated. Too often it is shut out from houses and living rooms for fear of injury to carpets or upholstery. The extent of this injury is much less than is generally supposed. Most modern dyes will fade in time, and a strong light only accelerates the change in a small degree; but, in any case, it is better to have the carpets fade rather than the occupants of the rooms, and the health-giving action of the sunbeams should not be dispensed with because the same action may decompose the dyes with which the furniture is coloured. It is impossible to have too much sunlight or fresh air; every living room, and every sleeping room, when possible, should face the south, and the radiant energy of the sun will be found to induce such a healthful and vigorous physiological action of all the organs of the body, that many doctors' and druggists' bills will be saved, and, in a short time, bring about that greatest blessing of life—a state of good health.

The Tobacco we Consume.—According to the report of the Inland Revenue Commissioners, the consumption of tobacco is increasing in this country at a very great rate, having more than doubled in the last forty years. At present it amounts to nearly a pound and a half per head of the population, as against thirteen and three-quarter ounces in 1840. It is satisfactory to smokers to know, on the authority of the principal of the Inland Revenue Laboratory, that the "law of this country does not permit the sale, under any conditions whatever, of tobacco when mixed with the leaves of any other plant."

English and French Cookery.—A celebrated French traveller remarked that the English have fifty religions and only one sauce. This, no doubt, shows ignorance as to religion, but a great deal of truth as regards the sauce, which probably was referred to as the very innocent concoction of a white sauce consisting either of some flour, butter, and milk, or some bread and milk, both equally tasteless, and making the despair of foreign travellers in this country who are accustomed to good French sauces. The many American travellers going to the Paris Exhibition at this time will no doubt be struck with the difference between fine French cookery and the somewhat monotonous English cookery, and it may be worth while to ask what is the secret of the well-known success of French cookery. This secret is simply the "stock-pot," a preparation of concentrated meat juices, enabling the cook to give to all dishes—soups, sauces, and entrées—the fine meat flavour which distinguishes refined cookery from coarse cookery. Many cooks undoubtedly know how to prepare stock, but in most cases the quality of of such stock is too weak and insipid, and, besides, does not keep in anything like warm weather; whilst, on the contrary, Liebig Company's Extract of Meat, being the finest concentrated meat juice (1 lb. extract equal to 40 lbs. best lean meat), keeps for any length of time, and in any temperature, and enables the cook to obtain the highest perfection in French cookery. During the warm season this may be a useful hint to ladies and housekeepers.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

What the Persians Eat.—An accomplished diplomatist has given in his *Persia and the Persians* a pleasantly graphic account of contemporary dinner at Teheran. The banquet was held in honour of the United States Minister and his *attachés* and a few native gentlemen of high rank, by the Grand Master of the Ceremonies, who is also a son-in-law of the Shah. The entertainment began with a concert of delicate Persian instruments, including a zither made of inlaid wood and a flat arrangement of silver wires of different lengths, touched by two slender spoon-shaped pieces of bone. This instrument is called a "santoor," and it is the Persian piano—only without the "forte." The concert lasted an hour, and was further enlivened by the fumes of Shiraz tobacco inhaled through silver pipes, mounted with turquoise. Then came "whets," or cordials—a pernicious anti-prandial stimulant which not only the Persians but the Turks appear to have borrowed from the Russian "zakushta." As regards the dinner itself, it may be mentioned that, although it has become quite common for the upper classes in Persia to sit down to table and furnish a *ménu à la Française* when they entertain European guests, it is still customary when only natives are present to sit on the floor round the viands, which are served on trays of silver or copper. The Shah himself, when he is at home, adheres to a practice which is evidently a survival of the nomadic life led by the Orientals of old. On the occasion dwelt upon by Mr. Benjamin the luxurious repast was spread on a carpet in the middle of the saloon. The dishes consisted chiefly of highly-spiced *ragoûts* with rich sauces; pickled and preserved fruits and confectionery; and, of course, numerous varieties of "kebabs," "pilafs," and "chillans," with abundant dishes of rice heaped high in cone-shaped piles. The "kebab" and the "pilaf," with the accompanying "ghee," or some kind of liquefied butter as a lubricant for the latter, are two of the corner-stones of Mohammedan cookery. They prevail not only in Persia, in Turkey, in Syria, and in Egypt, but also in India: but it is curious to remark the well-defined boundary line which divides the cuisine of Islam from that of the Hindus. Rice is common to both; but Mohammedan *chefs*—out of Anglo-Indian households, at least—know nothing of curry-stuff. The Shah must have partaken of many delicious forms of curry during his stay in England, and it would, perhaps, be as well, if the Persian *chef* whom his Majesty intends to leave in Paris took back with him to his native country a few lessons in curry-making. That he should come to England for the recipes and the instruction to be subsequently utilized in Teheran need not be in any way in the likeness of carrying coals to Newcastle, since in the mansions of many of our noblemen and millionaires there are Oriental curry cooks of surpassing excellence, and the Service clubs abound with retired military officers who are not only consummate judges of every variety of curry, but past masters in the preparation thereof. It must not be omitted to mention that, at the Persian dinner at which Mr. Benjamin and the members of his legation "assisted" five years ago, there was placed by each guest a loaf of the peculiar bread of Teheran, which is a little thinner than the sole of an ordinary shoe, and is the size of a large table napkin.

Its peculiar shape enables the guest to break off successive corners, and use them as spoons to take up choice morsels. This form of "panification" is decidedly an improvement on the convenient, but slightly primitive, Abyssinian practice of serving very underdone beefsteak—most succulent, old travellers used to say, when cut from the living cow—on chunks of bread. As the guest ate his steak the bread beneath became gradually saturated with gravy; and when he had finished his meat he proceeded to devour what was practically his plate.—*Daily Telegraph.*

The Rights of Women.—A woman has a right to choose her own husband. To her belong all the consequences of such a choice. It is well to offer advice, to set before her the true character of the man she elects to marry, and thereby to clear your own conscience—the only good result, as a general thing, of such advice!—but to attempt coercion of any sort is a fatal error. Marriage is the great disciplinary institution of the sexes, and its general trend and special detail cannot be averted or avoided by the average man and woman. To women a mistake in this matter is a mistake that involves portentous consequences, and no reasonable man or woman should be willing to take the great responsibility of directing or forcing that choice which will make or mar a whole life. The angelic young women in modern novels, who marry men they loathe to save a father or a brother from deserved shame or pecuniary ruin, are not and should not be the women of real life. "Thou shalt not do evil that good may come" is a divine truth, and ought to be impressed on the minds of our girls. But there is little danger that they will to-day indulge in such self-sacrifice; their end and aim are chiefly to "have a good time," and if they mistake the way to that end they learn a great and stern lesson, which may educate them for the eternal future. Therefore, as it is a purely individual matter, concerning the parties thereto far more than any one else, I contend that it is the inalienable right of every woman to select her own husband and take the consequences on her own shoulders. A woman should also be allowed to choose her own physician. This seems on its face to be a trivial matter, but it is one that involves much suffering or much comfort, and is intimately connected with her health—that greatest of earthly blessings. For women, particularly in illness, are nervous, fastidious, and susceptible to odd impressions and strange fancies to an extent no man can comprehend. A sick man is cross or stupid; if he is that *rara avis*, a patient sufferer, he is also silent and grateful; but a woman fidgets, cries, exhausts herself with imaginary terrors and apprehensions, and looks forward to her physician's visits with disgust or delight, as the case may be. If she is so unfortunate as to dislike the aspect, the manner, the voice of the most skilful doctor to be had, he will do her little good; she will not tell him her symptoms; she will resent his lightest touch; she will probably refuse to take his prescriptions, or find some means of disposing of his pills and potions wide of their due destination; while if she likes the face and speech of another, much less skilful it may be, his presence will give her comfort, allay her nervous exasperation, and soothe her terrors; her pulse will grow quiet, her restlessness subside, and she will accept his doses with that faith in their efficacy which adds so much to the power of all drugs, and invests the tiniest sugary pellets with all-powerful virtues. It is the petty tyranny of many men to force upon their households physicians of their own choosing, who are objectionable to their wives or daughters: it would be for the good of such autocrats if they reflected that this procedure injures themselves in this reflex action, for it only prolongs the invalidism of the shrinking and suffering patient, and makes the bills, which even autocrats detest, far heavier than they like to pay. Therefore, for the sake of both parties, it is best—would it be idle to add kindest?—for women to be allowed this useful right, and to choose the presence that cheers them, and the face they trust to medicine both mind and body.—*Mrs. Cooke, in the "North American Review."*

The Sanitary Institute, Parkes Museum, 74A, Margaret-street, Regent-street, W.—Lectures for Sanitary Officers, specially adapted for Candidates preparing for the Institute's Examination for Inspectors of Nuisances. The annexed list of lectures has been arranged by the Sanitary Institute for the special instruction of those desirous of obtaining knowledge of the duties of Sanitary Officers. The various subjects will be dealt with in a course of twelve lectures, given by well-known authorities. These lectures are a continuation of the courses previously held by the Parkes Museum, and it is proposed to repeat the course twice each year, to suit the requirements of persons preparing for the examinations of the Institute. The lectures will comprise the subjects scheduled for these examinations. The course will have a further use in supplying the wants of acting inspectors and of other persons desirous of obtaining a practical knowledge of sanitary requirements and regulations. At the close of each lecture, students will be allowed to ask questions upon the subjects treated. The lectures will be given on Tuesdays and Fridays at 8 p.m., in the Parkes Museum, 74A, Margaret-street, W., and students attending the course will be granted free admission to the Museum and Library during October and November. A fee of six shillings for the course will be charged to cover the necessary expenses. Students and others desirous of attending the lectures are requested to send in their names at once to the Secretary of the Institute, 74A, Margaret-street, W.—1889, October 8th, (1) Introductory Lecture—General History, Principles and Methods of Hygiene. Sir Edwin Chadwick, K.C.B.—October 11th, (2) Water Supply, Drinking Water, Pollution of Water. Dr. Louis Parkes, Diploma Public Health, Lond.—October 15th, (3) Drainage and Construction. Prof. H. Robinson, M.Inst.C.E.—October 18th, (4) Ventilation, Measurement of Cubic Space, &c. Sir Douglas Galton, K.C.B., D.C.L., LL.D., F.R.S.—October 22nd, (5) Sanitary Appliances. Prof. W. H. Corfield, M.A., M.D. (Oxon).—October 25th, (6) Scavenging, Disposal of Refuse and Sewage. Mr. H. Percy Boulnois, M.Inst.C.E.—October 29th, (7) Food (including Milk), Sale of Food and Drugs Act. Mr. Charles E. Cassal, F.C.S., F.I.C.—November 1st, (8) Infectious Diseases and Methods of Disinfection. Mr. Shirley F. Murphy, M.R.C.S.—November 5th, (9) General Powers and Duties of Inspectors of Nuisances.—Method of Inspection. Mr. J. F. J. Sykes, M.B., B.Sc., Diploma Public Health. November 8th, (10) Nature of Nuisances, including Nuisances the abatement of which is difficult. Mr. J. F. J. Sykes, M.B., B.Sc., Diploma Public Health.—November 12th, (11) Sanitary Law—General Enactments, Public Health Act, 1875, Model Bye-Laws. Mr. A. Wynter Blyth, Barrister-at-Law, M.R.C.S., Medical Officer of Health for St. Marylebone.—November 15th, (12) Sanitary Laws and Regulations Governing the Metropolis. Mr. A. Wynter Blyth, Barrister-at-Law, M.R.C.S., Medical Officer of Health for St. Marylebone.

IMPORTANT ANNOUNCEMENT.

A NEW VOLUME BEGINS WITH THE NUMBER FOR FRIDAY, OCTOBER 4th, 1889.

BONUSES TO SUBSCRIBERS TO "HEALTH."

HEALTH, as our readers are aware, may be obtained of all Booksellers and Newsagents, and at the Railway Bookstalls, on the day of publication. It may also be ordered from the PUBLISHER, 2, Paternoster-square, London, E.C., who will send the journal, post free, for a year, on receipt of postal orders for 10s. 10d.

As many of our readers who live in remote districts prefer to obtain HEALTH from the Publisher direct, and as we are desirous of increasing the already large number of subscribers who give us a yearly order for the journal, we offer the following FREE GIFTS and BONUSES to all who subscribe to HEALTH for one year or longer :—

(1.) To each Subscriber who remits 10s. 10d. to the Publisher, entitling him (or her) to receive one copy of HEALTH, post free, for one year, we shall present a copy of Dr. Andrew Wilson's work, entitled "A Manual of Health Science" (Longmans & Co.), value 2s. 6d.

(2.) To each subscriber who remits 21s. 8d., entitling him or her to receive two copies of HEALTH weekly, post free, for one year (or one copy for two years), we will present Dr. Richardson's "Ministry of Health" (Chatto & Windus), value 6s. The copies of HEALTH so ordered may be posted to separate addresses.

(3.) To each person who subscribes 32s. 6d., for three copies of HEALTH, post free, weekly, for one year, we will present the volume by Dr. Richardson mentioned above, and also the handsome, illustrated book entitled, "Studies in Life and Sense," by Dr. Andrew Wilson (Chatto & Windus), value 6s.—being a free gift of the total value of 12s.

The bonus last mentioned will also be presented to anyone who succeeds in obtaining three yearly subscribers to HEALTH, and who remits to the Publisher the sum of 32s. 6d., together with the names and addresses of the persons to whom the copies are to be posted each week.

As the literary gifts above-mentioned constitute books containing solid and reliable information regarding health and other matters of popular scientific interest, it will be seen that the above scheme, while intended to increase our already large circulation, also offers distinct advantages to new subscribers who guarantee by their subscriptions a year's support to this journal. All communications regarding subscriptions and other purely business details connected with HEALTH should be addressed directly to the PUBLISHER, 2, Paternoster-square, London, E.C., and *not to the Editor*.

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"It is a high-class manufacture of full nutritive value, and can be used either by itself or as an adjunct to many other foods. For children and for invalids, Grant's Scotch Oat Flour is specially suitable, and has been found in our experience to prove highly useful in cases in which ordinary oatmeal or coarser flours could not be used. We have, therefore, pleasure in endorsing our former commendation of this preparation as a most useful food-product equally for those in sickness and for those in health."—ED. "HEALTH."

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THE ACADÉMIE DE MÉDECINE of Paris and
FORTY MEMBERS of the
ROYAL COLLEGE of PHYSICIANS of LONDON.

RECENT TESTIMONIALS.

GALVANISM *v.* NERVOUS PROSTRATION.

Greyfriars Lodge, Ipswich, 11th September, 1889.

Dear Sir,—My letters in *The Christian World* eighteen or twenty years ago appear to have awakened an interest in your wonderful appliances which will never die out, for even now after these many years I am continually receiving letters and applications respecting them, many of them bearing bright testimony, not only to the cures actually wrought, but also to the permanency of them. Two such cases came before me last week—one of a lady who sought my advice for severe nervous prostration. She stated that I had so completely cured her father above sixteen years ago of long-standing and very painful sciatica, which had confined him to his bed for some time, but that he had been so well ever since I treated him with your Belts, that he strongly advised her to apply for treatment. Another case was of a lady who eight years ago was cured from severe nervous prostration and indigestion by a set of your Belts I had supplied; but these having been worn out she wished for a new set, so that she might always have such a friend in her house. These are but a sample of similar applications—sufficient to fill a newspaper—which I am constantly receiving, and which you are at liberty to deal with as you think best.—With much respect, yours sincerely,

ROBERT SEAGER.

To Mr. J. L. Pulvermacher, 194, Regent-street, London, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

Darmule, Kilwinning, N.B., 9th September, 1889.

Gentlemen,—I have great pleasure in stating that your Galvanic Belts are giving the most entire satisfaction, and my friend desires me to express his thanks for the benefit he already feels during the short time he has had them in use.—I am, yours truly, JOHN BAIRD.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* INDIGESTION and RHEUMATISM.

Kapunda, South Australia, 29th July, 1889.

Dear Sirs,—Having used your Galvanic Belts for Indigestion and Rheumatism some years ago while living in Lincolnshire, I can say from experience that your treatment can do all that you claim for it, and I have recommended your Belts to all my friends, who, in every case, have derived much benefit from their use. Since I have resided in this colony I have repeatedly advised sufferers from Indigestion and nervous affections to apply to you.—Yours very truly, T. W. MARTIN.

Messrs. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* PARALYSIS.

Holsworthy, Devon, 29th August, 1889.

Sirs,—It gives me great pleasure to testify to the benefit I have derived by wearing one of your Electric Bands on the knee. I have been weakened by paralysis from a boy, but since wearing your Galvanic Belt I can now walk with a firm step.—Yours truly, THOS. BARRABLE.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* EPILEPTIC FITS.

116, South-street, Greenwich, S.E., 22nd August, 1889.

Dear Sir,—Some time ago I purchased a galvanic appliance from you for my little boy, who was suffering from strong epileptic fits. He had many fits a day, and was so reduced and helpless that the doctor who was attending him gave me to understand he could not recover. However, I purchased your battery, and from the third day of application the fits left him, and he has never had any symptoms of them since.—Faithfully yours,

GEO. HAYES.

Mr. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

The distressing symptoms of NERVOUS EXHAUSTION, LOSS of MUSCULAR POWER, RHEUMATISM, SCIATICA, PARALYSIS, EPILEPSY, &c., are speedily removed by means of PULVERMACHER'S world-famed GALVANIC BELTS, which convey the electric current direct to the affected parts, gradually stimulating and strengthening all the nerves and muscles, and speedily arresting all symptoms of premature waste and decay.

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"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. *Those intended for the Publishing Office to be sent to* MR. A. P. WATT, THE PUBLISHER, *at the same address.*

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules:—

1. All questions are answered free of charge in the columns of HEALTH. A limited space only, is available for the insertion of replies each week.
2. All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

LETTERS TO THE EDITOR.

THE ANTI-TANNIC TEA INFUSER.

SIR,—As I have noticed two or three references lately in HEALTH to the subject of tea, I would direct your attention—if you have not already seen it—to "The Hobbs' Anti-tannic Infuser," as an admirable mode of making tea, especially for a dyspeptic person. It can be used with any ordinary breakfast-cup, and in three or four minutes a cup of tea is ready, free from tannin, and possessing what good flavour distinguishes the leaf. The "Infuser" is obtainable through any grocer for 1s. 6d., and I am sure needs only to be used to be approved. I may add that I am perfectly disinterested in the matter, and write simply to mention a really good little article, which, it seems to me, is not brought sufficiently before the public. I am, yours truly, E.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

ENQUIRER.—1. Any chemist will procure you the medicine. 2. To cure constipation, follow advice given to "A. Lamb" in last week's HEALTH. 3. Read the pamphlet recommended to "Limpet" in last week's HEALTH. You should certainly limit your smoking. 4. See rule 4 to Correspondents.

J. JOHNSON.—Read the pamphlet recommended to "J. C. S." in the present number, and follow out the directions given therein about healthy living in respect of diet, cold sponging, and exercise. You should give up all extra work, and devote your leisure to rest and amusement. The Syrup of the Hypophosphites in a teaspoonful dose, twice a day, after food, in water. You are only suffering from the effects of overwork.

ORTEGA.—Try the Cascara and diet prescribed to "Priest" in the the present number of HEALTH. A very admirable form of enema is a teaspoonful of glycerine plain, or diluted with water. See article in HEALTH, No. 285 on glycerine as a cure for constipation. A tonic such as Inman's Syrup of the Hypophosphites (dose as ordered to "J. Johnson" above) would benefit you when your constipation has been cured. Trust to diet (*e.g.*, fruits, brown bread, Scott's Oat Flour, and the like) in preference to drugs. Plenty of out-door exercise is advisable.

RAVEN.—Use the hair-lotion ordered to "Sikh" in the present number. Keep the hair short for a time; wash it once a week with Bayley's Spermaceti Soap and tepid water, and use soft brushes only.

TALGARTH.—You only require a little care in diet; your symptoms point to a slight digestive disturbance only. Avoid salt foods, sweets, and cheese, and take boiled white fish, Scott's Oat Flour, milk puddings, and the like. Try Van Houten's Cocoa in preference to tea. If constipation is present, use the Cascara as ordered to "Priest" in the present number, and make fruits and vegetables part of your diet. If not bettered by these hints, write again.

A. H. D.—1. Follow advice regarding the hair given to "Sikh" in the present number. 2. What you name usually depends on liver-disturbance. Try twenty or thirty drops of Cascara Cordial, or two Cascara Tabloids when the symptoms are present, and limit your flesh flood for a time. 3. Simply a sign of overwork. If possible, get a little rest and change. The tonic ordered to "Ortega" above might do much good if your other symptoms have disappeared. 4. Of no consequence; drink freely of Vichy Water.

STELLA.—It is impossible to answer your question definitely, for one person differs widely from another in respect of digestive powers. As a rule, cream is the most digestible of the fluids you name.

RUFUS.—You are only suffering from nervousness, and nothing will cure you unless you simply make up your mind to neglect your symptoms. Why do you suppose you are the observed of all observers? You may require a tonic: if so, try that ordered to "Amicus" in last week's HEALTH.

A. F. BELL.—Apply daily to the piles a lotion consisting of one part Hazeline and two parts water, and apply also each night the ointment sold by Bayley, 17, Cockspur-street, Pall-mall, S.W. Pyrmont Tabloids should also be taken.

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SCOTT'S MIDLOTHIAN OAT-FLOUR.—There is no preparation which can be assimilated with greater facility than such a flour as this. Those who suffer from indigestion might substitute for their ordinary breakfast materials this flour, prepared according to the recipe given by Messrs. Scott, and printed on the tins.—HEALTH.

J. C. S.—You must read and carefully study the pamphlet, "A Lecture to Young Men" (post free, 1s. 1d., 5th Edition, from H. Renshaw, 356, Strand, London, W.C.), and follow out the directions as to food, cold sponging, and tonics there prescribed.

TOM L.—The only safe means for increasing or decreasing weight are those by diet. Read the articles in HEALTH (to be had of the Publisher), "How to get Thin or Fat;" and also the article on "A New Fat Cure," published recently in this journal.

HONA.—Use a Chloride of Ammonium Inhaler. Apply to your druggist, or to Messrs. Burroughs, Wellcome & Co., Snow-hill-buildings, London, E.C., for an inhaler, and directions regarding its use.

PRIEST.—Give up the tonic for a time, and take twenty or thirty drops of the Cascara Cordial, or two Cascara Tabloids, twice daily between your meals. Eat wholemeal bread, stewed fruits and vegetables, and avoid tea and coffee. Substitute for tea, morning and night, Scott's Midlothian Oat Flour.

A. C. O.—Your ailment is caused by indigestion, and by taking exercise too soon after meals. Rest after meals regularly. Take twenty drops Cascara Cordial in water, between meals, once or twice daily, or two Cascara Tabloids (Burroughs, Wellcome & Co.'s), and let your diet consist of vegetables largely for a time.

E. R.—Send us stamped addressed envelope, and we will forward the address of a specialist who removes superfluous hairs by means of electricity.

S. M. M.—Try the following: Chlorodyne, one drachm; ipecacuanha wine, one drachm; syrup of squills, one drachm; glycerine, to make up two ounces. Label: "A teaspoonful in a little water at intervals."

AXIOM.—Try the effect of taking twenty grains bromide of potash on going to bed in a wineglass of water, and repeat the dose between meals during the day if your symptoms still trouble you.

C. E. F.—Lamplough's Pyretic Saline is the best of saline aperients. Take a dose each morning for a few days.

E. M. A.—Consult the French Hygienic Society, 6, Conduit-street, London, W., and use their Pomade Trichophile for the cure of scurf.

SONING.—The usual dose of antipyrin is ten grains, repeated every three or four hours; but we should not advise you to use it, save under the guidance of a medical man.

ESTELLA.—A lotion for blackheads is made by mixing three drachms of sulphur, four drachms of glycerine, and four ounces of rectified spirit. This should be rubbed into the skin at night.

B. EAST.—Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and follow out the tonic remedies therein prescribed.

J. GRIEVE.—Try the following mixture: Carbonate of ammonia, one drachm; bicarbonate of potass, a drachm and a half; infusion of chiretta, six ounces. Mix. A tablespoonful thrice daily before food.

STAR.—Wash your hands with Bayley's Soap and tepid water, and use thereafter a dusting-powder composed of powdered oxide of zinc, one ounce; powdered camphor, one drachm; and starch, two ounces. Mix. Label: "The dusting-powder, for external use only." Woolley's Sanitary Rose Powder may be used alternately with the dusting-powder.

G. GIBBS.—Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and follow out the advice it gives.

A. S.—Try the following:—Subnitrate of bismuth, six grains; carbonate of magnesia, ten grains; powdered gum arabic, twenty grains. Mix, to form a powder. Stir in a cup of boiled milk, and when cool, stir up again before being swallowed. To be taken twice daily after food.

TEMPERANCE.—You should see Harness's Xylonite Truss (52, Oxford-street, London, W.); it is washable and durable, and can be made to fit any case of rupture. Consult a surgeon as to the ailment.

MENTAL.—Use Sanitas Fluid for the skin and clothes. Use the Powder to the closets and sinks. Sanitas Disinfecting Soap and Cleansing Powder should be used for the house.

S. BAKER.—Take Blaud's Pills after food, one pill twice daily at first, and to be increased by one pill daily, until, say, six are taken each day in your case.

E. GERARD.—For the falling hair, use the following lotion:—Solution of ammonia, half an ounce; tincture of cantharides, half an ounce; eau de Cologne, one ounce; water, to eight ounces. Mix. Rub into the roots morning and night with a soft sponge or piece of lint.

TINY.—Try Bayley's Cure for Piles (17, Cockspur-street, London, S.W.), and give this excellent remedy a fair trial.

TABLE.—To make hair-wash powder, take powdered borax, one pound; camphor, one drachm; oil of bergamot, twenty drops. Mix these ingredients thoroughly.

S. E.—Try a pill prepared containing one grain permanganate of potash, to be made up with Kaolin. Take one of these pills thrice daily after your food.

SIKH.—Brush the hair regularly night and morning with a soft brush, and rub in a little of the following to the roots each morning:—Eau de Cologne, two ounces; tincture of cantharides, two drachms; oil of rosemary and oil of lavender, of each ten drops. Mix. Label: "The hair lotion."

C. T.—Try the following: Powdered rhubarb and powdered calumba, of each ten grains; aromatic powder, five grains. Mix: and take one such powder at bedtime.

INQUIRER.—1. All depends on the type of the disease. If it is phthisis, it may certainly be inherited; but in the case of the other chest-diseases, inheritance does not act so distinctly or powerfully. 2. Read the pamphlet recommended to "J. C. S." in the present number. 3. Not necessarily. Yes, multiple births are more pronounced in some families than in others.

BASSANO.—All your troubles arise simply from weak digestion. Read the advice given to "Ortega" in the present number, and note specially the hints as to use of Cascara or glycerine. For the rest, give up taking drugs, and attend rigidly to your diet. See also advice on this head given to "Talgath" above. It is probable that a glass of the Vino Tinto (advertised in our pages) taken with your meals will materially assist your food assimilation. If not cured, write again.

C. E. A.—Consult Mr. Pulvermacher, 194, Regent-street, London, W., and take his opinion on the point you name.

G. LATOUR.—The pan-closet is condemned by every sanitarian. Fit up a Twyford's "Unitas" in your office, and your insanitary troubles will cease.

SCOTLAND.—1. There is no book we know of treating of the topics you name; but we intend to write a series of articles shortly in HEALTH on the subjects mentioned. 2. Tea or coffee, taken immediately after dinner, is injurious to digestion. Meat teas are to be avoided. 3. Not necessarily. 4. No: rather the reverse.

A. SINCLAIR.—Sponge the parts morning and night with cold water to which Hazeline has been added, and wear a suspensory bandage. Apply to the piles Bayley's Cure (17, Cockspur-street, London, W.), and continue the Cascara, making vegetables a part of your dietary. Give up all other drugs, and let your food be of light character. It is possible that a little good wine (*e.g.*, Vino Tinto, advertised in our pages) will do you good, if taken at meals, by way of assisting the assimilation of your food.

LACTANTUS.—1. The prescription you name should not be given in two bottles; the two ingredients you name are to be mixed and taken as directed in the pamphlet to which you refer. 2. Try a course of regulated gymnastic exercises.

M. BELL.—Only a physician can advise you in the matter to which you refer. You might try with advantage taking for a time a milk dietary, and peptonize the milk with Fairchild's Powders, which any druggist wil procure for you. Your food should in addition consist of milk puddings, Grant's Oat Flour, and strong soups. In this way you will improve your digestion, and avoid the symptoms to which you refer. Eat stale bread only, and rest rigidly after your meals as a necessary rule of health.

E. T.—Your only cure is to occupy your mind with healthy thoughts, and to take plenty of out-door exercise. Try cycling, or join a gymnastic club, and by indulging in healthy exercise you will overcome your present symptoms. If you otherwise indulge your desires, you will assuredly suffer bitterly in the future.

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